Sept. 15, 1936. O. A. JACKSON 2,054,289

SIGN

Filed April 20, 1935

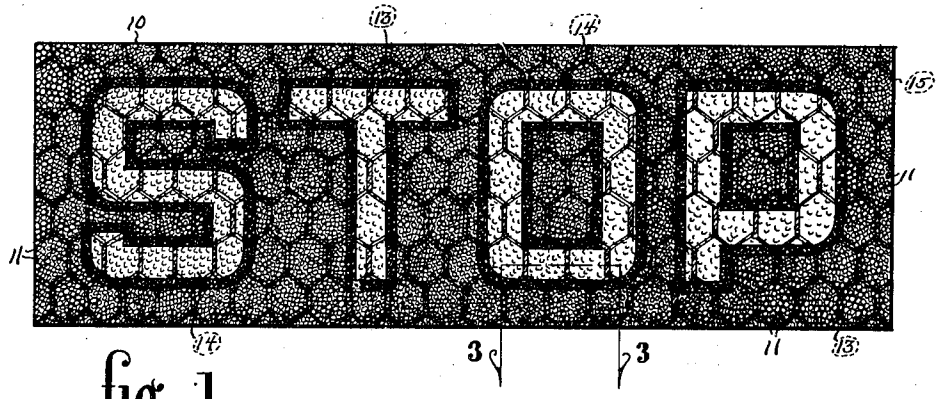


fig. 1

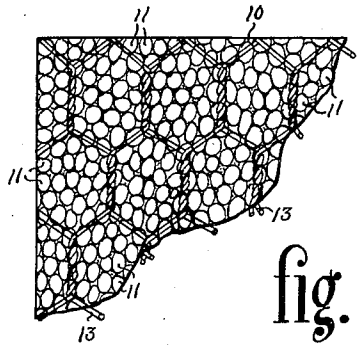


fig. 2

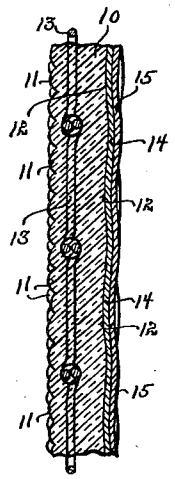


fig. 3

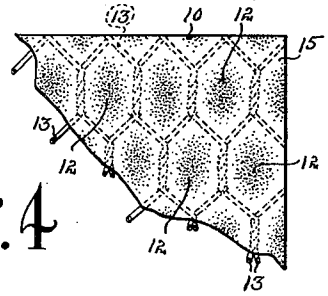


fig. 4

INVENTOR.

O. A. Jackson

BY

M. Talbert Dick

ATTORNEY.

Patented Sept. 15, 1936 2,054,289

UNITED STATES PATENT OFFICE

2,054,289

SIGN

Orville A. Jackson, Des Moines, Iowa

Application April 20, 1935, Serial No. 17,481

2 Claims. (Cl. 40—135)

The principal object of my invention is to provide an attractive sign that is economical in manufacture and durable in use.

A further object of this invention is to provide a sign for both day and night use that has no operating expense.

A still further object of my invention is to provide a sign that is capable of successfully reflecting light rays without blinding the observer.

A still further object of this invention is to provide a sign of long life and one that is not damaged or affected by weather.

A still further object of my invention is to provide a sign of the reflector type that diffuses and directs the reflected light rays at various angles.

My invention consists in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawing, in which:

Fig. 1 is a front view of my sign ready for use.

Fig. 2 is an enlarged front view of a portion of the glass used in the manufacture of my sign.

Fig. 3 is an enlarged cross-sectional view of a portion of my sign taken on line 3—3 of Fig. 1 and more fully illustrates its construction.

Fig. 4 is an enlarged back view of a portion of my sign showing the shallow depressions in the back surface of the glass used in making the sign.

There are many attractive signs for both night and day use now being manufactured. However, most of these signs depend on a direct source of electric current for their illumination at night and are therefore costly and complicated in manufacture and installation and have high operation and maintenance costs. To eliminate such costs some sign manufacturers have turned to the reflecting type of sign, where light rays from such as automotive vehicle headlamps, etc., are picked up and redirected, thereby making the sign readable at night. The chief objections to most of the signs of this character, however, are that they are easily broken, tend to blind the observer, and are usually observable only from certain definite angles from the sign. I have overcome such objections as will hereinafter be appreciated.

Referring to the drawing, I have used the numeral 10 to designate the glass upon the back of which the indicia or character strokes of the sign are imposed. The design, type, composition, and construction of this glass sheeting 10 is highly important. This glass 10 is of the crystal clear variety and has integrally formed on its face or front a plurality of closely arranged comparatively small lenses 11. These lenses 11 are each of a convex arcular or semi-spherical formation, as shown in Fig. 3, and glass of this type is usually known in the trade as hammered glass.

The numeral 12 designates a plurality of comparatively shallow depressions in the back surface of the glass sheeting 10. These depressions each cover a comparatively large area as shown in Fig. 4, and are therefore in diameter much greater than the diameter of each of the lenses 11. The numeral 13 designates metallic wire mesh reinforcing imbedded throughout the area of the glass sheeting 10. This reinforcing wire makes the glass sheeting of shatter-proof construction and adds greatly to the artistic appearance of the finished sign.

In manufacturing the sign the indicia or character strokes are painted or otherwise imposed on the back surface of the glass 10. Obviously, any color may be used, but silver mirror paint is highly recommended due to its reflecting properties. In some instances, two or more colors will be used in forming each character. In Fig. 1, I show two colors, for each character, i. e., a light or silver color for the center of each character and outlined with a darker color. I have used the numeral 14 to designate these character strokes or indicia painted or otherwise imposed on the glass. After the characters have been placed on the glass the entire back of the glass and backs of the characters 14 are covered with a suitable protective paint 15. For most satisfactory results I use vitralite paint. Any suitable color may be used and provides the necessary background for the sign.

In use my sign functions substantially as follows: Light rays are reflected from the characters 14 and protective coating 15 toward and through the front of the glass 10. Due to the irregular back surface of the glass the characters and protective paint coating will also have their face surfaces irregular and the bright rays will therefore be reflected at various angles through the glass 10. This not only makes the sign readable at almost any angle in front of the sign, but gives the characters and background a very desirable and attractive wavy appearance.

The small closely spaced apart lenses 11 successfully diffuse the light rays passing through the glass 10, thereby eliminating what would otherwise be a blinding effect on the observer. As the lenses are each substantially semi-circular in cross-section the diffusing of the light rays will be even and uniform. Even in the daytime the

sign will pick up the necessary light for reflecting purposes.

From the foregoing it will readily be seen that I have provided a very desirable inexpensive night and day sign.

Some changes may be made in the construction and arrangement of my improved sign and method of making same without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim:

1. In a sign, a sheet of glass material having a plurality of shallow depressions in one of its sides and a plurality of convex lenses on its other side; each of said shallow depressions having an area substantially greater than the area of any one of said lenses, and indicia on the side of said sheet of glass having said shallow depressions; said indicia having light ray reflecting characteristics.

2. In a sign, a sheet of glass material having a plurality of shallow depressions in one of its sides and a plurality of convex lenses on its other side; each of said shallow depressions having an area substantially greater than the area of any one of said lenses, metallic reinforcing strand elements embedded in said sheet of glass material, and indicia on the side of said sheet of glass having said shallow depressions; said indicia having light ray reflecting characteristics.

ORVILLE A. JACKSON.